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### (54) Hygienic toilet protection device

(57) A hygienic toilet protection device comprising a plurality or pack of disposable, impermeable, stacked seat covers and applied on the mouth of a hygienic toilet

bowl in such a way that each disposable seat cover (1) which is in contact with the user skin is removable without impairing the integrity of the underlying covers.

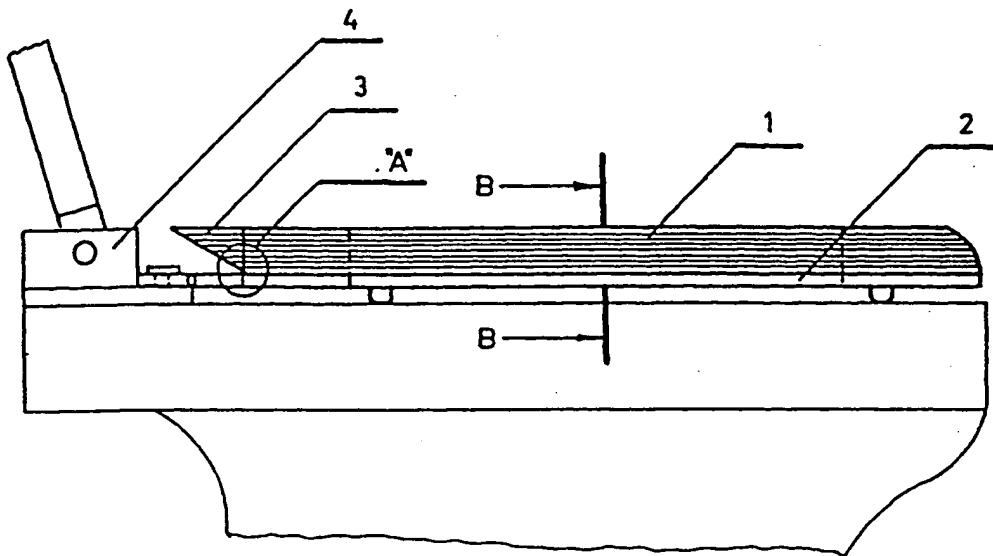


FIG. 1

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**Description**

[0001] The present invention concerns a device for hygienic protection of toilet users.

[0002] The problem of safety from infective pathologies determined by public toilets such as toilets in schools, hotels, restaurants, hospitals, etc, is more and more important for public opinion, not to mention transit buildings (stations, harbours, airports) and transport means wherein there is a continuous flow of travelers coming from any parts of the world, and especially from areas with a high health risk. This situation generated several devices or systems on the market in order to make said toilets hygienic.

[0003] Among these devices some, which are placed in different areas of the hygienic bowl or inside its water flush reservoir, generate at each water flushing a flow of sterilizing fluid neutralizing various pathogenic germs which are present in the bowl.

[0004] Unfortunately such devices solve only partly said technical problem for the following drawback. More particularly they cannot act on the seat, generally made of plastic material, which overlaps the ceramic hygienic bowl of the toilet. The seat can be cleaned and disinfected only by hand and obviously this manual operation cannot be done after each use.

[0005] Furthermore this problem is not solved by using paper towels or individual seat covers to be placed on the seat because of both positioning problem and hygienic lack due to the liquid permeability of such elements.

[0006] The object of the present invention is to avoid the prior art drawbacks.

[0007] Therefore the subject matter of the present invention is a hygienic toilet protection device which assures each user to avoid any pathology due to the physical contact with infectious parts, comprising at least a plurality of disposable removable seat covers made of biodegradable material and easily produced at low costs.

[0008] Briefly, according to the present invention the hygienic toilet protection device comprises a plurality of disposable, impermeable stacked seat covers and applied on the mouth of a hygienic toilet bowl in such a way that the seat cover which is in contact with the user skin is removable without impairing the integrity of the underlying covers. Such features characterizing the invention are recited in claim 1.

[0009] Further advantages of the hygienic toilet protection device according to the present invention are set forth in the dependent claims.

[0010] Further features, advantages and details of the hygienic toilet protection device according to the present invention, will be better understood from the following description and from the attached drawings wherein non limiting preferred embodiments are illustrated by way of example.

[0011] Figure 1 is a schematic side view of a first em-

bodiment of the device according to the present invention.

[0012] Figure 2 is a top view of the device of Figure 1.

5 [0013] Figure 3 is an enlarged side view of the "A" detail shown in Figure 1.

[0014] Figure 4 is a sectional view along the line B-B of Figure 1.

[0015] Figure 5 is a schematic side view of a second embodiment of the present device.

10 [0016] Figure 6 is a sectional view along the line C-C in Figure 5.

[0017] Figure 7 is a side view of a third embodiment of the present device.

[0018] Figure 8 is a sectional view along the line D-D of Figure 7.

[0019] Referring firstly to the previously illustrated figures 1-4, the device according to the present invention has a plurality or a pack of stacked disposable seat covers 1 provided with a self-adhesive coating 7 on the lower side, said seat covers being applied on a support such as a base 2 preferably made of rigid plastic material.

20 The strength of the adhesive coating 7 must be sufficient as to maintain compact the pack of seat covers 1, but in the meantime it must be such to allow an easy removal of the used uppermost cover.

[0020] Each layer or seat cover 1 overlaps the underlying ones for the whole surface except for a small end portion 3 where no adhesive coating is provided, which is indispensable in order to grip and remove the preceding layer without effort, such a removal advantageously not impairing the underlying layers. In order to make grip easier, the corresponding portions 3 of the seat covers of the pack are staggered as it can well be seen from the detail "A" in Figure 3.

25 [0021] Both the seat covers 1 and the base 2 have the same shape of a conventional toilet seat and therefore the device can be directly used substituting the conventional toilet seat and hinged to the closure cover 4 of the toilet.

30 [0022] In a second embodiment as shown in Figures 5 and 6, the device comprising the base 2 and the pack of seat covers 1 is applied on the conventional toilet seat 6, the device having a shape consistent with it. The base 2 of the device is then fixed to the seat 6 through lateral holding elements 5.

35 [0023] In the third embodiment shown in Figures 7 and 8 the base 2 is not present and the pack of seat covers 1 is applied directly on the conventional toilet seat 6, on which the adhesive layer 7 of the lowermost cover of the pack is fixed. Advantageously each cover is made of a thin polyethylene film or a material having the same impermeability features, with such a thickness as to guarantee a reduced thickness of the whole pack as well as a great number of covers for each pack ready 50 to be used, e.g. a thickness of 0.05-0.09 mm, preferably 0.07 mm. In such a way a pack 14 mm thick can contain about 200 seat covers 1.

55 [0024] The use of the present hygienic toilet device

comprising said cover stack is extremely easy. Before or after the use of the toilet the uppermost cover in contact with the user skin, is removed and the presence of the staggered portions 3 without adhesive coating will allow an easy removal of each cover. The used cover can then be discharged in a waste container. When the pack of seat covers is finished, a new pack will be applied on the base 2, or also the base 2 could be every time removed and substituted with a new one along with the seat cover pack. This second solution is certainly preferable from the hygienic point of view.

[0025] Therefore hygiene and easy use are guaranteed. Furthermore the present invention can also be used along with disinfecting agents for both public and private toilets.

[0026] Obviously, numerous variations, modifications, arrangements, integrations, and substitutions can be made to the previously described preferred illustrative and non-limiting embodiments without departing from the scope of the present invention as determined by the appended claims.

### Claims

1. A hygienic toilet protection device comprising a plurality or pack of disposable, impermeable, stacked seat covers applied on the mouth of a hygienic toilet bowl in such a way that the seat cover (1) which is in contact with the user skin is removable without impairing the integrity of the underlying covers.

2. The device according to claim 1, characterized in that the pack of seat covers (1) is applied on a rigid support consisting of a base (2) made of plastic and having the same shape of the toilet seat.

3. The device according to claim 2, characterized in that said base (2) constituting the rigid support of the pack of seat covers (1) replaces the conventional toilet seat and is hinged to a toilet closure cover (4).

4. The device according to claim 2, characterized in that the base (2) which supports the pack of seat covers (1) is applied on the conventional toilet seat (6) to which is fixed through lateral holding elements (5).

5. The device according to claim 1, characterized in that each seat cover (1) of the pack has a lower self-adhesive coating (7) on the whole surface except for an end portion (3) in order to simplify the grip and the detachment between said cover (1) and the following cover.

6. The device according to claim 5, characterized in that said covers (1) are made of polyethylene and

have a thickness from 0.05 to 0.09 mm.

7. The device according to claim 5 characterized in that said end portions (3) of the pack where no adhesive coating is provided are staggered in order to make the grip easier.

8. The device according to claim 1, characterized in that said pack of seat covers is directly applied on said toilet seat (6) by means of the self-adhesive coating (7) of the lowermost cover of the pack.

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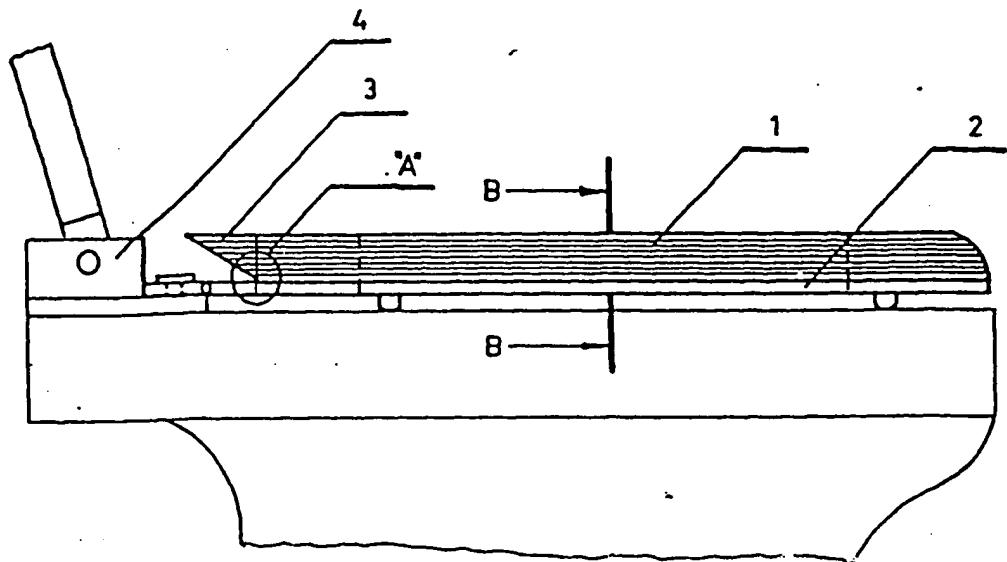


FIG. 1

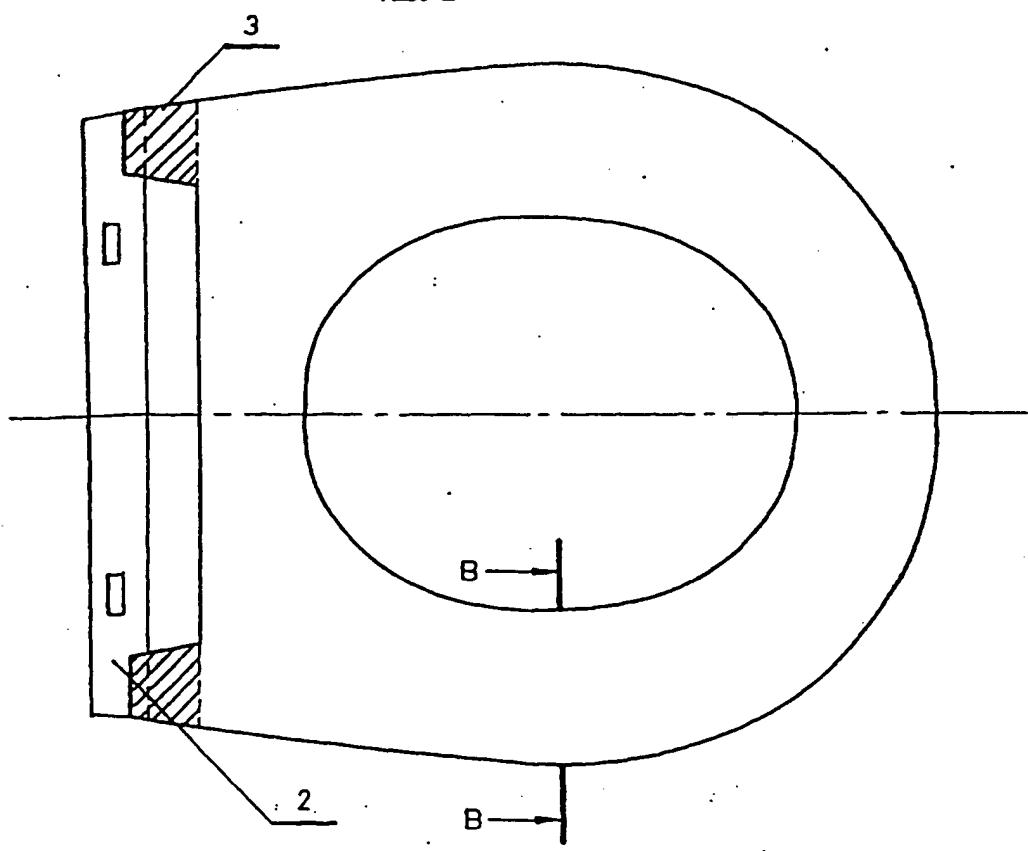


FIG. 2

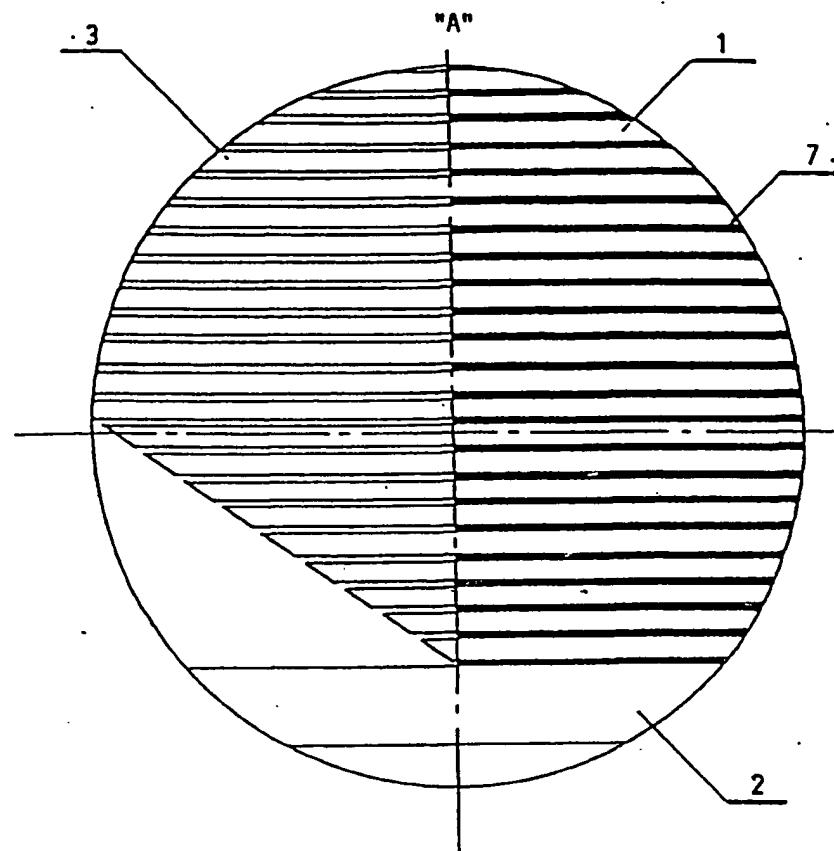


FIG. 3

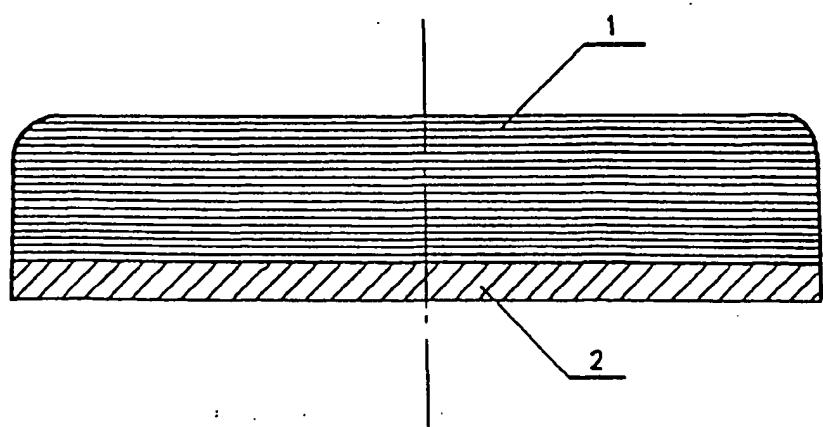
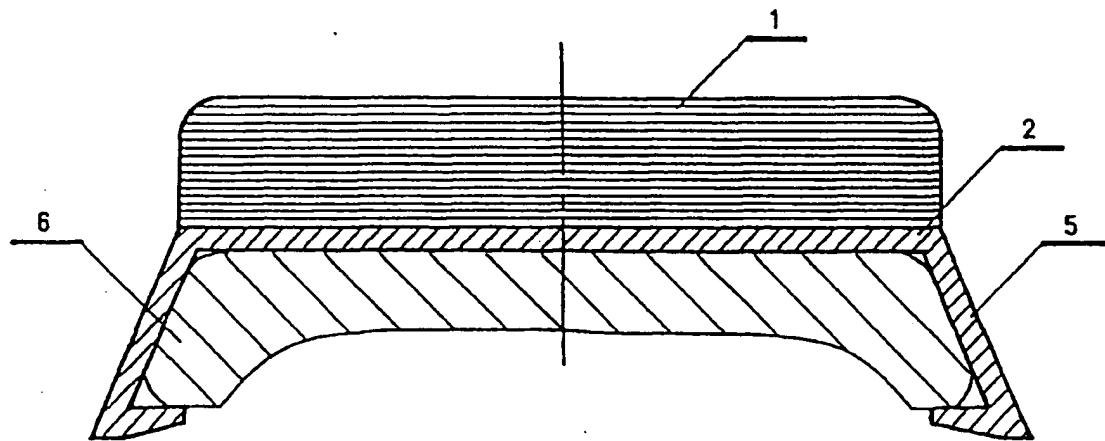
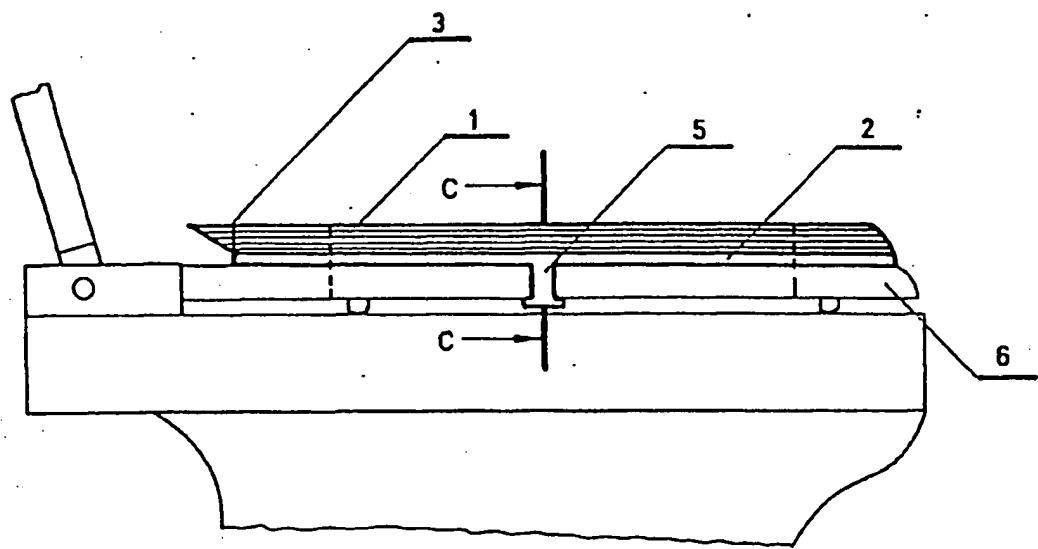


FIG. 4



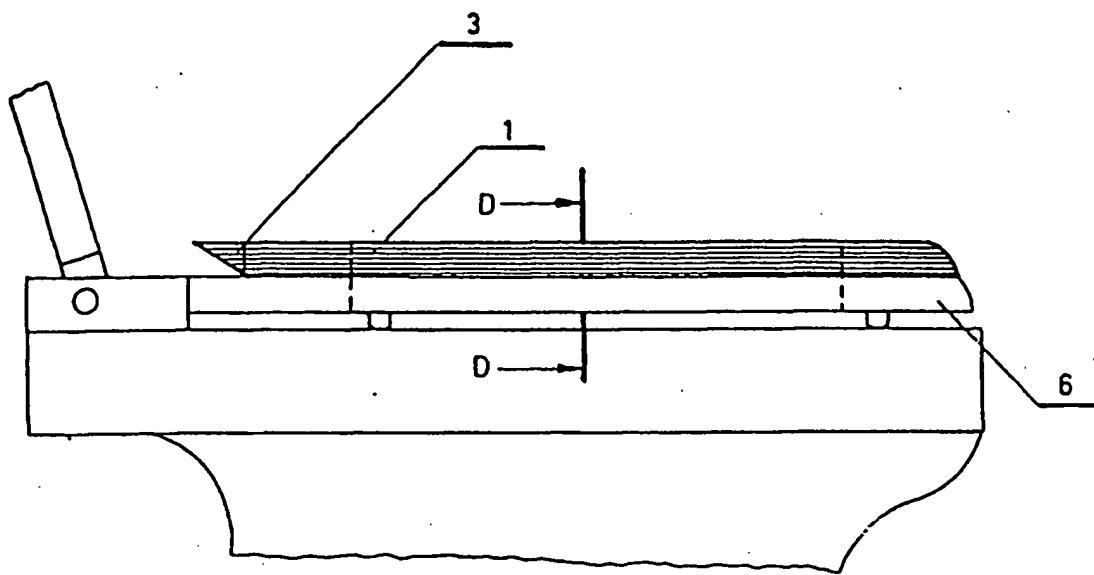


FIG. 7

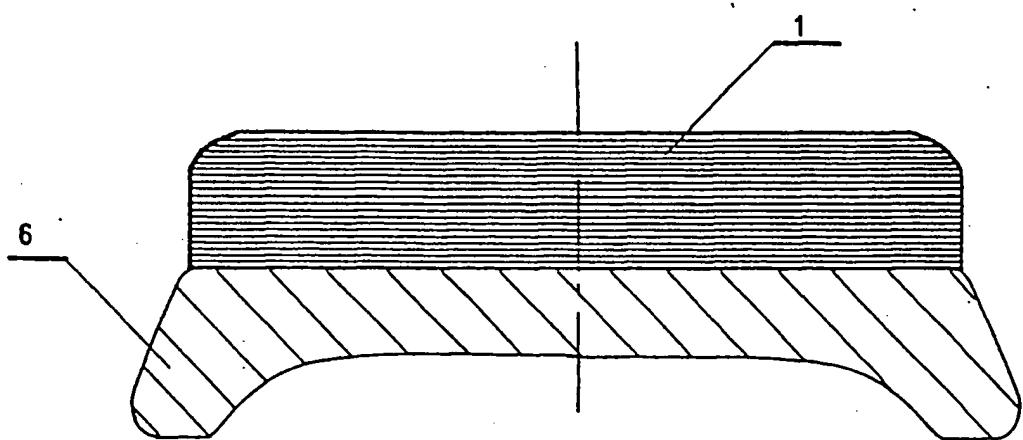


FIG. 8

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Application Number  
EP 01 20 2236

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The present search report has been drawn up for all claims				
Place of search	Date of completion of the search	Examiner		
THE HAGUE	26 November 2001	Fordham, A		
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